

Operating Instructions

Editing Video Cartridge Recorder

NV-5130A -E
-A
-B
-EF



 **National**

Before operating this set, please read these instructions completely.

FEATURES

1. **PAL/CCIR, SECAM/CCIR (NV-5130A-EF only) TV standard 1/2" video cartridge recorder.** Tapes recorded on NV-5130A are fully compatible with other 1/2" herical scan VTRs of the same standard.
2. **Built-in colour capability standard.** NV-5130A does not need any additional, optional circuits to convert it into a colour VCR.
3. **Fully electronic capstan servo editing with the flying erase head for insert and assembly editing of video information.** The NV-5130A editing system produces clear, sharp edits without tear, roll or other disturbances that would normally degrade the picture.
4. **Field-by-field insert editing.** When Editing button is pressed, the insert begins only at the beginning of the next field (Blanking Interval Editing). When Editing button is pressed again, the insert is ended after the field end, for sharp edits without tear or roll.
5. **Video only editing is made possible by the flying erase head.** This allows you to edit the picture without changing the sound.
6. **Audio dubbing gives you additional control over the sound track.** A separate audio erase head lets you edit the sound without affecting the picture.
7. **Remote control unit connection possible** (Rec., Play, FF, Rew., Stop).
8. **Feather touch solenoid operation.** This allows you to operate VCR easily and surely.
9. **Automatic operation is possible** (Play, Search, Rew., Eject).
10. **Three inputs switchable.** For added flexibility, the NV-5130A has two UHF-type connectors and one VTR monitor connector for Camera 1, Camera 2, or TV inputs.
11. **HPF™ video heads provide high S/N ratio, high quality pictures.** They also afford extra long head life.
12. **Dropout noise compensator virtually eliminates dropouts, to assure stable colour and B/W pictures free from annoying degradations.**
13. **Still framing.** Still framing enables you to analyze portions of any videotaped program in detail.
14. **Skew and tracking controls can be adjusted during playback.** A tracking level meter helps you to determine the optimum adjustment.
15. **Tape indicator and tape counter.** The needle of the tape indicator shows the approximate position of the tape. For your convenience, the 3-digit tape counter is also provided for easy editing, so you can easily find out necessary point on the tape by using either of them.
16. **Precision inscribed tape path on head drum insures 100% interchangeability with all National 1/2" VCRs.**
17. **Ease of servicing.** NV-5130A uses modular construction with plug-in printed circuit boards to simplify maintenance.
18. **Video level meter indicates input signal level even in Play or Stop mode so the input video level can be set for edit purposes.**
19. **Dubbing switch.** This switch assures the better picture quality of the dubbed tape.
20. **NV-5130A-EF is specially designed not only for SECAM but also for PAL reception.**

NOTES WHEN USING THIS UNIT

- Set the voltage selector to the correct line voltage before turning on the unit.
- If this unit is suddenly moved from a cold place to a warm place, condensed drops of water may form inside this unit.
Wait for approximately 60 minutes before use.

GENERAL NOTES

1. Do not block the ventilation slits on the rear, top, bottom and both side of the lid.
2. Do not put anything on this unit.
3. Place this unit horizontally.
4. Do not insert fingers or any object into the video cartridge compartment.
5. Avoid operation or leaving this unit in a hot, cold or damp place, or in a magnetic field.
6. Remove the cartridge when carrying this unit.

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FOR YOUR SAFETY

1. THIS APPARATUS MUST BE EARTHED.

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

2. DO NOT REMOVE PANEL COVER BY UNSCREWING THEM.

To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

3. AC POWER CORD CONNECTION. (NV-5130A-B only)

The wires in mains lead for this apparatus are coloured in accordance with the following code.

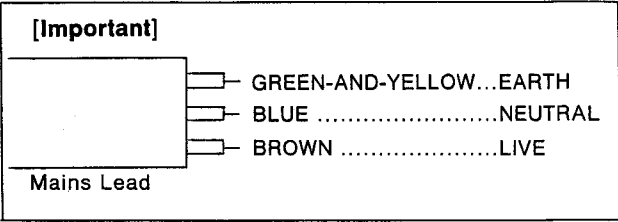


Fig. 1

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol $\perp$ or coloured GREEN or GREEN-AND-YELLOW.

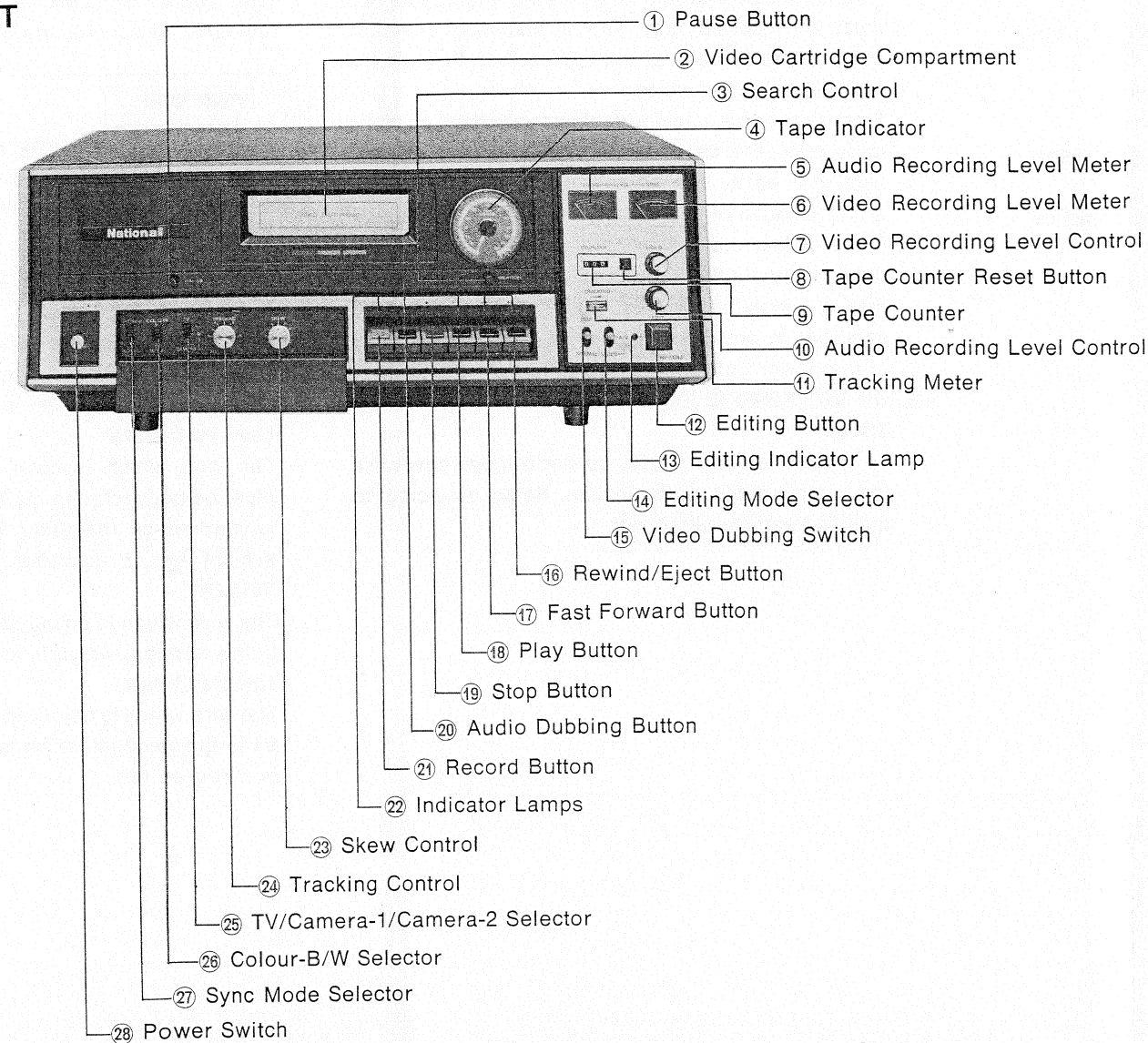
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured red.

MAJOR OPERATING COMPONENTS

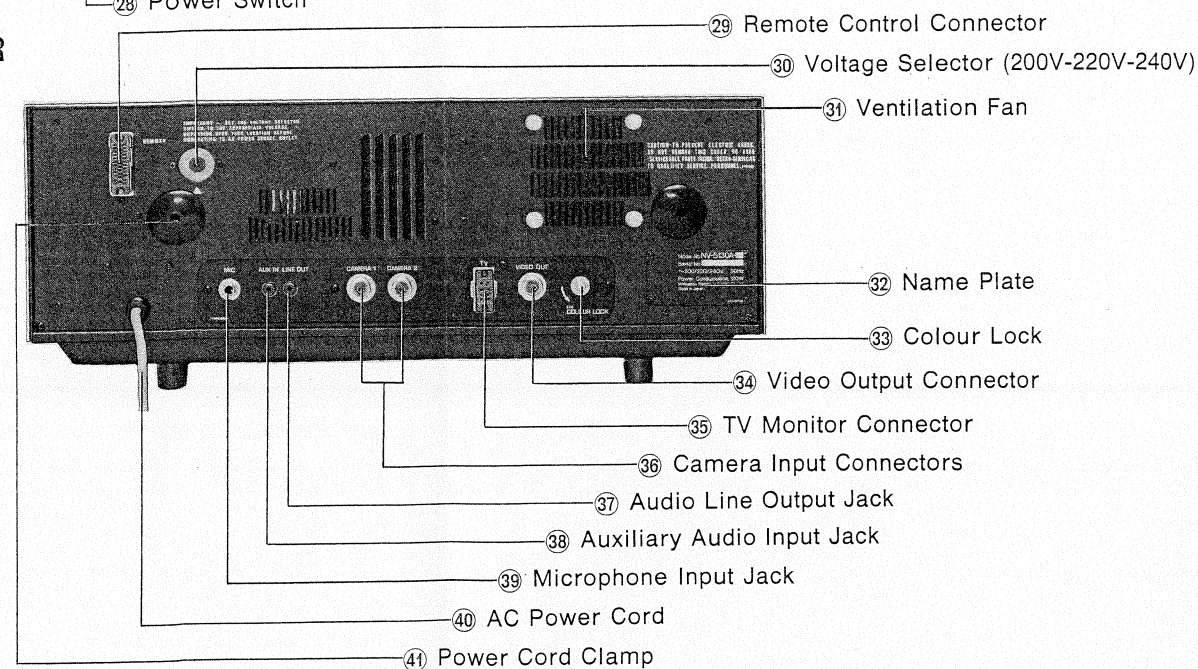
FRONT

Fig. 2



REAR

Fig. 3



CONTROLS AND THEIR FUNCTIONS

FRONT (Fig. 2)

1 PAUSE BUTTON

Press this button to view a still image.

* A still image can be seen only while this button is pressed during the playback.

* When the pause button is pressed, a still image will appear but exhibit "noise" lines near the top, middle or bottom and, in some cases, the image may flutter vertically. If so, release the button and press again, a few times if necessary.

2 VIDEO CARTRIDGE COMPARTMENT

For insertion of a video cartridge for playback or recording.

3 SEARCH CONTROL

(See 4 below).

4 TAPE INDICATOR

The search control is used to preset the tape indicator to playback the desired portion of the tape. See page 10 for further details.

5 AUDIO RECORDING LEVEL METER

Indicates the audio recording level.

6 VIDEO RECORDING LEVEL METER

Indicates the recording level and also indicates the video input level in all modes as long as video input signal is connected.

7 VIDEO RECORDING LEVEL CONTROL

Turn this control to adjust the video recording level while visually referring to the Level Meter 6. Adjust the recording level at 0 VU.

8 TAPE COUNTER RESET BUTTON

9 TAPE COUNTER

10 AUDIO RECORDING LEVEL CONTROL

Controls the audio recording level. Should be adjusted so that the Recording Level Meter 5 needle is exactly at the 0 VU position.

11 TRACKING METER

Indicates the tracking condition. (See page 10.)

12 EDITING BUTTON

To edit the prerecorded program simply press this button while playing back the tape. The prerecorded program, if any, will automatically be erased and replaced by the new recording. Refer to "ELECTRONIC EDITING." (See page 12.)

13 EDITING INDICATOR LAMP

14 EDITING MODE SELECTOR

Use this selector to select assembly editing or insert editing. Two types of insert editing can be selected: audio/video or video only. (See page 12.)

15 VIDEO DUBBING SWITCH

Use this switch at video dubbing. Set this switch to "DUB" position, and playback pre-recorded tape. The signal output from this unit will be dubbed to another unit without disturbance.

16 REWIND/EJECT BUTTON

Press this button to rewind the tape rapidly. When the tape is completely rewound, the video cartridge will pop out for easy removal.

17 FAST FORWARD BUTTON

Press this button to forward the tape rapidly.

18 PLAY BUTTON

Press this button to play the tape. When the tape ends, the tape rewinds automatically and the cartridge is ejected.

19 STOP BUTTON

Press this button to stop the tape at any mode, or to release the Record Button 21.

20 AUDIO DUBBING BUTTON

To replace an audio recording with another, press this button and record. See page 16.

21 RECORD BUTTON

To record on cartridge tape, press the Play Button 18 after pressing this button. To release this button, press the Stop Button 19.

22 INDICATOR LAMPS

Illuminate when the corresponding function button is pressed.

23 SKEW CONTROL

Playback image distortion in the upper portion of the monitor screen can be minimized by adjusting this control. (See page 10.)

②4 TRACKING CONTROL

Turn this control to remove the "tracking noise" in the image which may appear when a tape recorded on another recorder is played back. Set to the "FIX" position for tapes recorded on and played back on this unit. (See page 10.)

②5 TV/CAMERA-1/CAMERA-2 SELECTOR

Use this selector to select the TV monitor (connected to the TV Monitor Connector ③5) or the camera (connected to the Camera Input Connectors ③6) as the recording source.

The audio portion does not change when this selector is changed between camera-1 and camera-2.

②6 COLOUR-B/W SELECTOR

Use this selector to select colour or B/W program in both record and playback mode.

②7 SYNC MODE SELECTOR

Use this selector to synchronize the tape speed with two types of signals; internal (power line) and normal (incoming video). (See page 11.)

When sync is not obtained during playback, place the selector to "INT. SYNC" position.

②8 POWER SWITCH

Press this switch to turn on the unit.
Press again to turn off.

REAR(Fig. 3)

②9 REMOTE CONTROL CONNECTOR

For connection of a remote controller.

③0 VOLTAGE SELECTOR

Use a blade screwdriver to set to local voltage (200V, 220V or 240V).

③1 VENTILATION FAN

③2 NAME PLATE

③3 COLOUR LOCK

Refer adjustment to qualified service personnel.

③4 VIDEO OUTPUT CONNECTOR

For playback on a TV monitor.

③5 TV MONITOR CONNECTOR

For connection of a TV monitor (having an 8-pin terminal) by using the VTR-monitor connection cable.

③6 CAMERA INPUT CONNECTORS

Connect the video camera to this terminal.

Two cameras can be connected at the same time.
Set the TV/Camera-1/Camera-2 Selector ②5 to select the input video signal.

③7 AUDIO LINE OUTPUT JACK

For connection with an external power amplifier or a speaker system.

③8 AUXILIARY AUDIO INPUT JACK

For direct recording from an auxiliary sound source, such as a radio, tuner, Hi-Fi system, audio tape recorder, etc.

When using this jack, disconnect the input connected to the Mic Input Jack ③9.

When using this recording method, make sure that the volume control of the external sound source is set at a low level.

③9 MICROPHONE INPUT JACK

For connection with impedance $600\Omega \sim 10k\Omega$ microphone (optional).

When using this jack, disconnect the Auxiliary Audio Input Jack ③8.

④0 AC POWER CORD

④1 POWER CORD CLAMP

RECORDING FROM A TV MONITOR

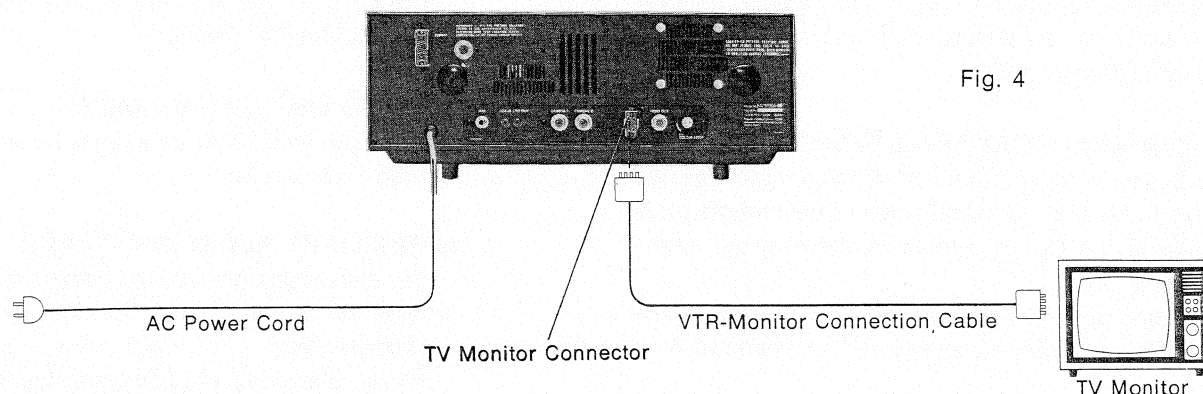


Fig. 4

1. Connect, as shown in Fig. 4, the recorder to a TV monitor using the VTR-monitor connection cable.
 - * Either of the plugs at the ends of the VTR-monitor connection cable fit the 8-pin connector on the recorder and the monitor.
 - * When disconnecting the VTR-monitor connection cable, always press the release button on the side of the plug.
2. Turn on the Power Switch ⑳.
3. Set the TV/Camera-1/Camera-2 Selector ㉕ to the "TV" position.
4. Set the Colour-B/W Selector ㉖ to COLOUR or B/W depending upon the program to be recorded.
5. Turn on the monitor, set the TV/VTR selector on the TV monitor to TV, and choose the TV program you wish to record. Make the fine tuning adjustment on the TV monitor for best picture and then set the TV/VTR selector to "VTR" position.
6. Make sure that the removable plastic piece in orange colour (to prevent accidental erasure) is in the square hole of the cartridge when recording. Otherwise, the Record Button ㉑ cannot be pressed.
7. Insert the video cartridge all the way into the opening until it locks in place. The tape will start moving automatically.
8. Press the Stop Button ㉑ after the cartridge is inserted.
9. Press the Record Button ㉑. The image and sound of the TV program will then appear on the TV monitor.
10. Adjust the Video Recording Level Control ㉗ so that the indication needle of the Video Recording Level Meter ㉘ is at the 0 VU position.
11. Adjust the Audio Recording Level Control ㉙ so that the indication needle of the Audio Recording Level Meter ㉚ is at the 0 VU position.
12. Set the Tape Counter to "000" by pressing Tape Counter Reset Button ㉛.
13. Press the Play Button ㉜ while holding the Record Button ㉑ down. The tape will then start moving and audio/video recording begins.
14. To stop recording, press the Stop Button ㉑.
15. When tape ends, tape rewind automatically and cartridge is ejected.
16. To remove the cartridge from the compartment, press the Rewind/Eject Button ㉝. The cartridge will pop out when the tape is completely rewound.

RECORDING FROM A VIDEO CAMERA

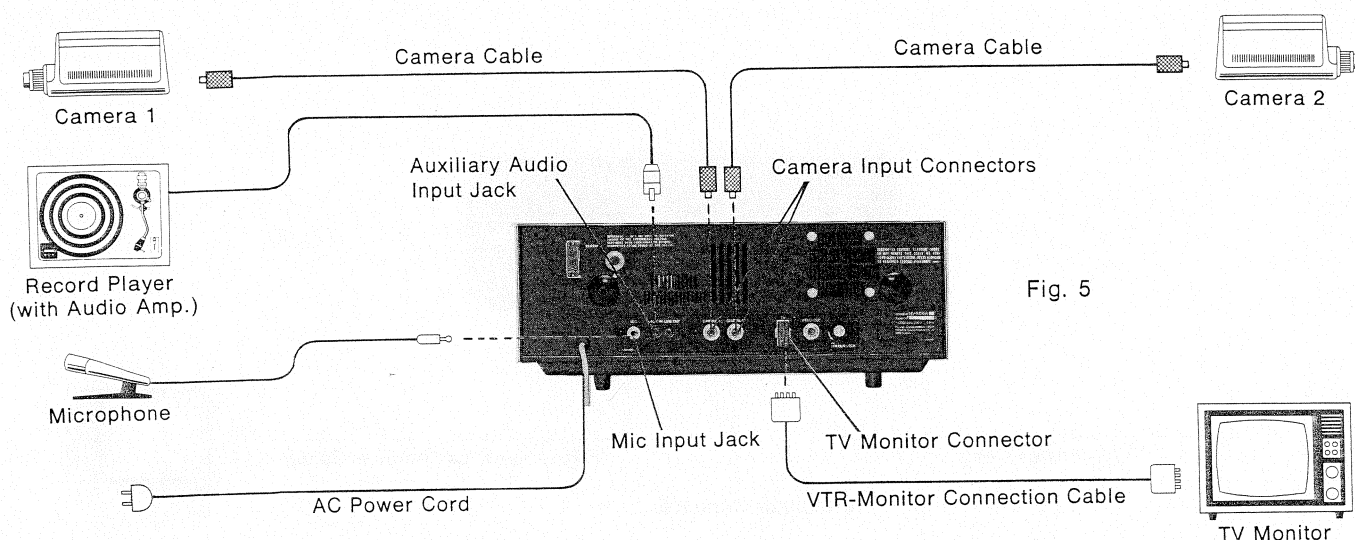


Fig. 5

1. Connect, as shown in Fig. 5, the recorder to a TV monitor using the VTR-monitor connection cable.

- * Either of the plugs at the ends of the VTR-monitor connection cable fit the 8-pin connector on the recorder and the monitor.

- * When disconnecting the VTR-monitor connection cable, always press the release button on the side of the plug.

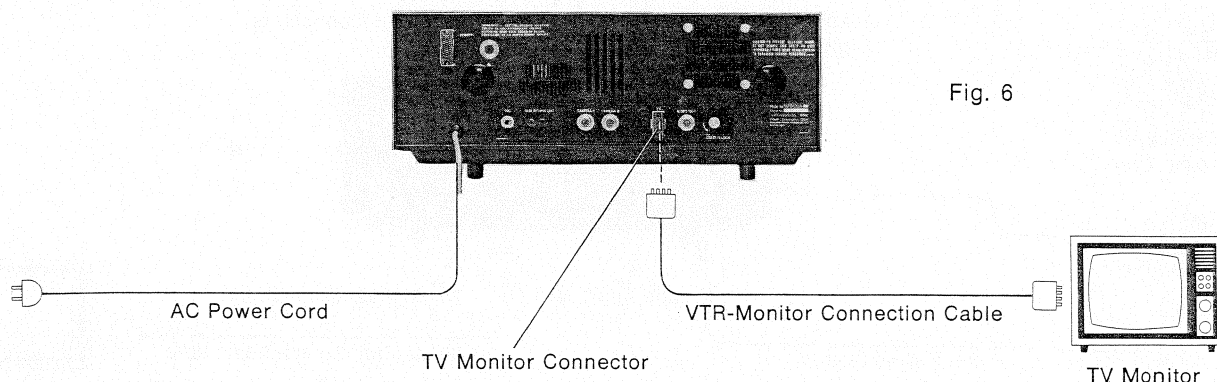
2. Turn on the Power Switch ⑳.
3. Set the TV/Camera-1/Camera-2 Selector ㉕ to the "CAMERA-1" or "CAMERA-2" position.
4. Set the Colour-B/W Selector ㉖ to COLOUR or B/W depending upon the program to be recorded.
5. Turn on the monitor, set the TV/VTR selector on the TV monitor to "VTR" position.
6. Make sure that the removable plastic piece in orange colour (to prevent accidental erasure) is in the square hole of the cartridge when recording. Otherwise, the Record Button ㉑ cannot be pressed.
7. Insert the video cartridge all the way into the opening until it locks in place. The tape will start moving automatically.
8. Press the Stop Button ㉑ after the cartridge is inserted.
9. Press the Record Button ㉑. The image and sound of the TV program will then appear on the TV monitor.
10. Adjust the Video Recording Level Control ㉗ so that the indication needle of the Video Recording Level Meter ㉘ is at the 0 VU position.
11. Adjust the Audio Recording Level Control ㉙ so that the indication needle of the Audio Recording Level Meter ㉚ is at the 0 VU position.
12. Press the Play Button ㉒ while holding the Record Button ㉑ down. The tape will then start moving and audio/video recording begins.

13. To stop recording, press the Stop Button ㉑.
14. When tape ends, tape rewinds automatically and cartridge is ejected.
15. To remove the cartridge from the compartment, press the Rewind/Eject Button ㉒. The cartridge will pop out when the tape is completely rewound.

NOTES:

- When using the Auxiliary Audio Input Jack ㉙, disconnect a microphone which is connected to the Microphone Input Jack ㉚ because it has priority.
- For recommended camera operating procedure, refer to the operating instructions of the camera.

PLAYBACK ON A TV MONITOR



1. Connect the TV monitor with the recorder by means of the VTR-monitor connection cable.
2. Turn on the power switches of this unit and the TV monitor.
3. Set the TV/VTR selector on the TV monitor to the "VTR" position.
4. Set the Sync Mode Selector ⑳ to the "INT. SYNC" position.
5. Set the Colour-B/W Selector ㉑ to the position corresponding to the program to be played back.
6. Insert the pre-recorded video cartridge all the way into the opening until it locks in place. The tape will start playing automatically, and image and sound will appear on the TV monitor in approximately 8~10 seconds.
7. Adjust the TV monitor for the best picture and sound. Adjust the Skew Control ㉒ and the Tracking Control ㉓ if necessary. (See page 10.)
8. To stop playback, press the Stop Button ㉔. When tape ends, tape rewinds automatically and cartridge is ejected.

TO VIEW A STILL IMAGE

If the Pause Button ① is pressed during playback, the still image can be seen only while the button is pressed.

NOTES:

- Be careful not to press this button longer than necessary because it will cause excessive wear of the video heads.
- It may happen, while viewing a still image, that a "noise" band, as shown in Fig. 7 at the right, appears in the image. If so, release the Pause Button ① and then press it again until the noise band disappears on the TV screen.

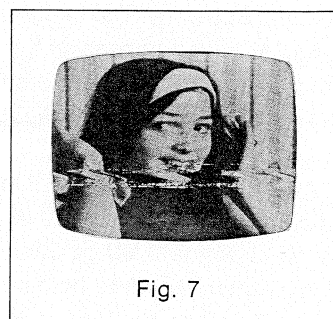
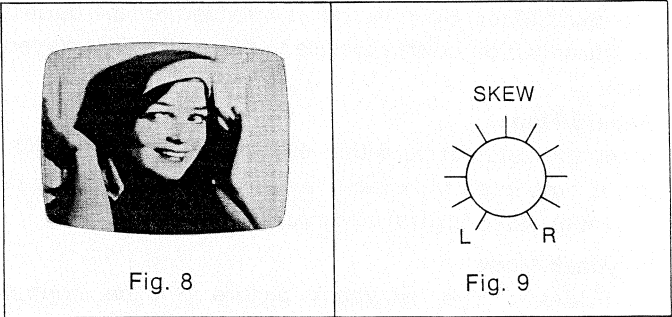


Fig. 7

SKEW AND TRACKING CONTROL

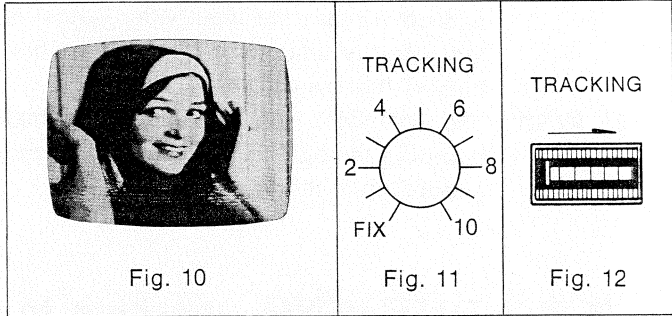
[SKEW CONTROL]

If the upper portion of the playback image is pulled or bent to the right as illustrated in Fig. 8, move the Skew Control 23 toward the "Left" indication on the panel to eliminate the distortion. Move the nob slowly toward the "Right" indication if the image is bent to the left. (Fig. 9)



[TRACKING CONTROL]

1. Turn this control to the "FIX" position when playing back a tape recorded on this unit.
2. If there is "noise" in the video, as shown in Fig. 10, adjust the Tracking Control 24 so that the indication needle of the Tracking Meter 11 fluctuates to the maximum right extent. This may be required when playing back a tape recorded on another VCR.



FAST FORWARD TO A PRESELECTED PROGRAM

A simple dial setting permits fast forward to a preselected program.

1. Set the Sync Mode Selector 27 to the "INT. SYNC" position.
2. By turning the Search Control 3, align the search needle on the tape dial from where you wish to start playback.
3. Insert the cartridge tape and press the Fast Forward Button 17 to move the tape. The tape will automatically start playback when the tape indicator needle reaches at the search needle.

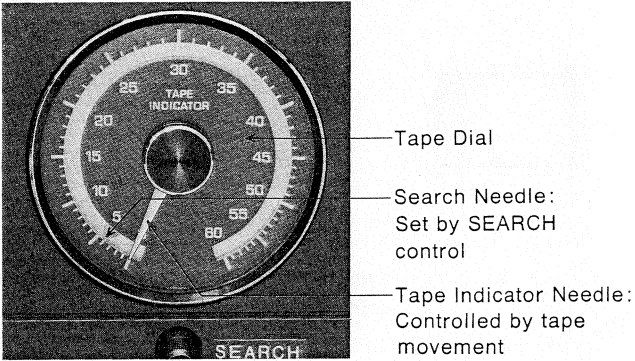


Fig. 13

USING THE REMOTE CONTROLLER

If a remote controller (NV-A151, available as an optional) is connected, playback, fast forward, rewind, stop, record, and audio dubbing can be performed from distance.

NOTES:

- The controls of this unit also can be used even if a remote controller is connected. For detailed information regarding operation of the remote controller, refer to the operating instructions of the remote controller.
- Edit function can not be achieved by the remote controller.

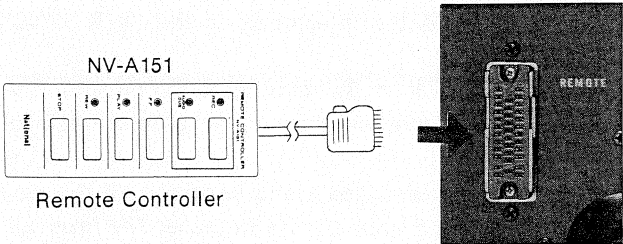


Fig. 14

SYNC MODE SELECTOR

The Sync Mode Selector ⑳ is provided for the perfect synchronization of the picture to be recorded or played back.

Record Mode:

Place the selector to either of the "NORMAL" or "INT. SYNC" mode so that the unit will operate according to the input video signal synchronization.

Playback Mode:

"NORMAL"; The playback picture will be normal whenever the input video signal is connected. Unless the input video signal is fed into the unit, the picture will be disturbed (not synchronized picture).

"INT. SYNC"; The playback picture will be normal because the picture will be synchronized according to the line frequency.

Editing Mode:

Be sure to place the selector to "NORMAL" so that the playback picture will be synchronized according to the video input signal synchronization for perfect editing.

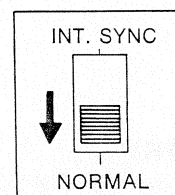


Fig. 15

VIDEO DUBBING (machine to machine)

NV-5130A has a Video Dubbing Switch ⑮. This is used for obtaining best picture quality in case of the dubbing from the unit to other VCR or VTR.

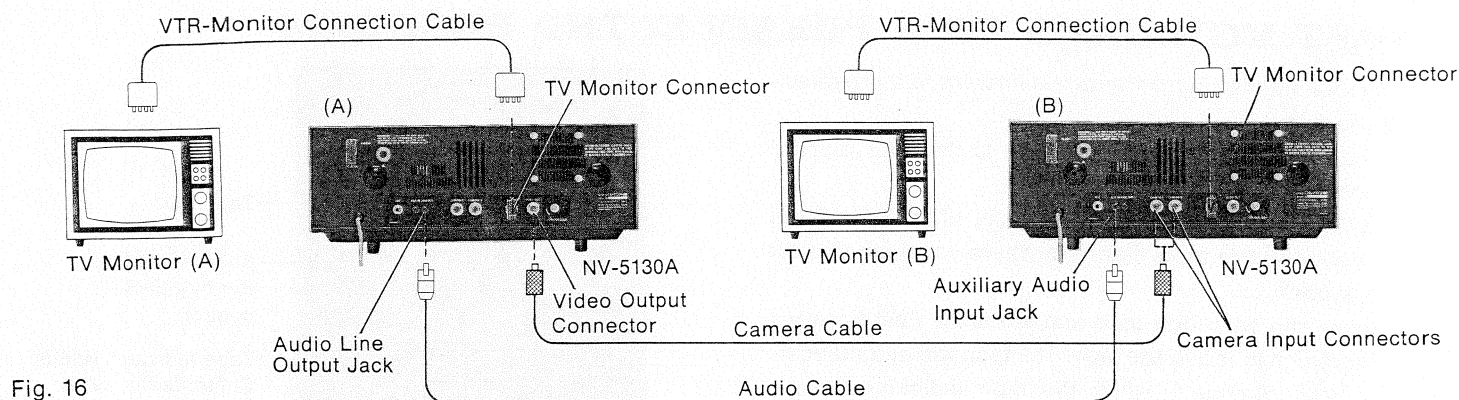


Fig. 16

1. Connection should be made as shown in Fig. 16.
2. Turn on the power switches of this unit and the TV monitor.
3. Set the TV/VTR selector on the TV monitor to the "VTR" position.
4. Set the Sync Mode Selector ⑳ to the "INT. SYNC" position.
5. Set the Colour-B/W Selector ㉔ to the position corresponding to the program to be played back for dubbing.
6. Insert the pre-recorded video cartridge all the way into the opening until it locks in place. The tape will start playing automatically, and image and sound will appear on the TV monitor in approximately 8~10 seconds.

7. Adjust the TV monitor for the best picture and sound. Adjust the Skew Control ㉓ and the Tracking Control ㉔ if necessary. (See page 10.)
8. Set the Video Dubbing Switch ⑮ of unit (A) to the "DUB" position.
9. After above setting, start the recording on unit (B).

CAUTION:

Picture on monitor (A) is disturbed of Colour Lock ㉓, but it is not affect to the dubbed tape by unit (B).

ELECTRONIC EDITING

Electronic editing is a system which permits the user to "edit" an already recorded tape, adding new video and audio portions to the existing program without resulting in a visible disruption between images.

In order to perform this electronic editing more completely, model NV-5130A is designed to perform the following various functions:

1. By employing a capstan servo-mechanism, constant tape speed and stable video signal are assured, as well as elimination of disturbances during editing.
2. By employing a flying erase head which precedes the video head, short-time editing can be performed.
3. This flying erase head makes field-by-field insertion possible. (For this reason, the new edited image starts from the vertical blanking period.)
4. By using the two Camera Input Connectors ③⑥, selection of input is easier.

Electronic Editing

There are two ways of electronic editing; "assemble editing" and "insert editing". Model NV-5130A is designed, moreover, to permit insert editing of only video (without audio).

(a) Assemble editing (Fig. 17)

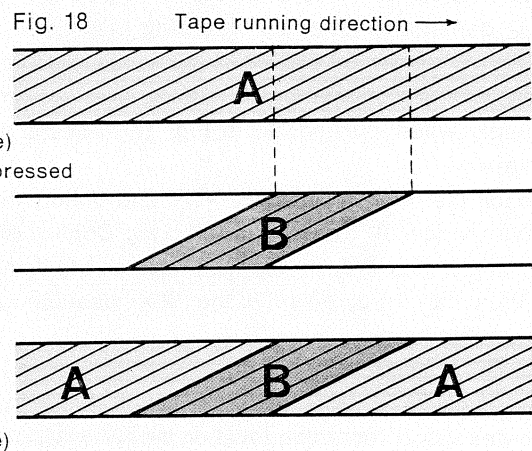
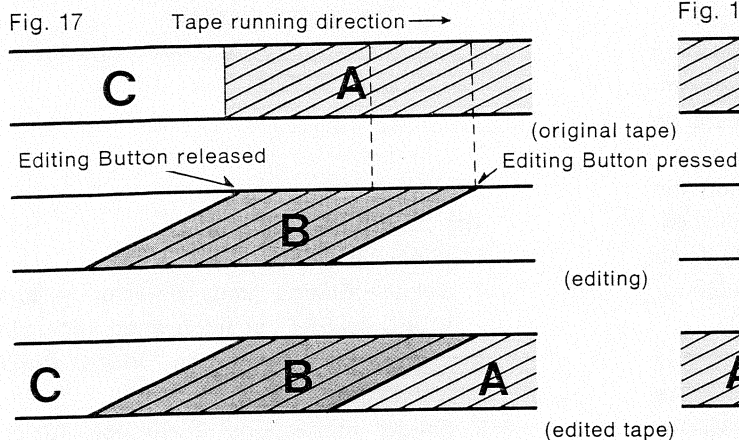
"Assemble editing" is an editing method which permits the user to add program material to the end of a previously recorded portion, thus making one program which can be viewed as one continuous, uninterrupted program. As shown in Fig. 17, suppose that part "A" had been previously recorded, and that part "C" is unrecorded, or has been erased. To this, the new program, "B", is to be added, resulting in a new combined recording to the point where "B" meets "C", and a final result of A and B connected (edited).

(b) Insert editing (Fig. 18)

"Insert editing" is an editing method which permits the user to add program material somewhere in the middle of a previously recorded portion. As shown in Fig. 18, the new program material is added between parts of the already-recorded material, "A".

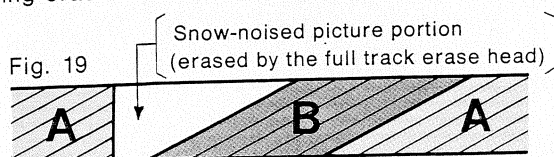
The result is a new program consisting of parts A, B and A.

■ Video-only insert editing (leaving the former audio material on the tape, only the video portion is inserted by the method described above).



NOTES:

■ As the video heads are preceded by a flying erase head, the clear cut-in picture will be obtained when the Editing Button ⑫ is pressed, however, the erased portion of the pre-recorded program will be on the TV screen as the snow-noised picture at the end of the assemble editing for a few seconds. This is caused by the inevitable distance between the flying erase and full track erase head.



■ For insert editing, only the flying erase head is operated for erasing. For this reason, both the start and the end are free of disturbance at the junctions where program is joined.

1. Editing from another VTR

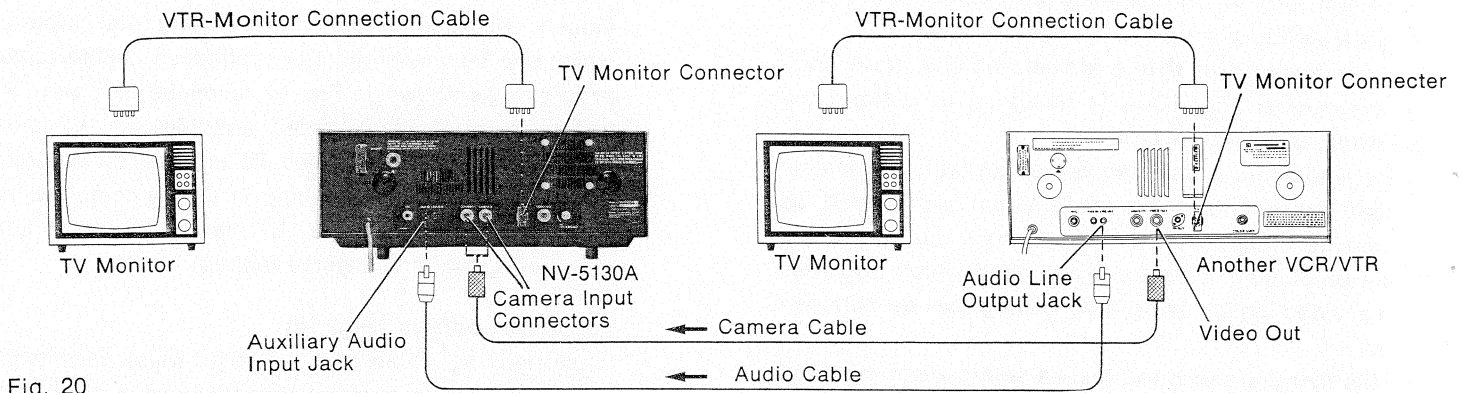


Fig. 20

(a) Assemble editing (See Fig. 17)

1. Set the Editing Mode Selector ⑭ to the "ASSY" position.
2. Set the Sync Mode Selector ⑳ to the "NORMAL" position.
3. Set the TV/Camera-1/Camera-2 Selector ㉕ to the Camera-1 or Camera-2 whichever is used.
4. Set the Colour-B/W Selector ㉖ to "COLOUR" or "B/W" depending upon the recording material.
5. Playback the tape on the NV-5130A while watching the TV monitor connected to it. Stop the tape immediately when portion (A) in Fig. 17 appears on the screen.
6. Playback the tape on another VTR and obtain the optimum video by turning the Tracking Control ㉔. If the tape is recorded and played back on the same unit, the control may be set to the "FIX" position for optimum playback.
7. Press the Record Button ㉑ on the NV-5130A while playing back on another VTR in order to adjust the audio and video recording level on the NV-5130A for best recording.
8. Confirm the beginning of editing portions (A) and (B) in Fig. 17, by the Tape Counter ⑨ or by the playback images.
9. Once editing portions (A) and (B) have been determined, rewind both tapes for a few seconds, allowing a minimum of three feet from the beginning of the editing portions. This length will assure stabilization of the tape speed prior to editing.

10. Playback both tapes. The NV-5130A is now ready for editing. At the moment when the image of the portion (A) appears on the TV monitor for another VTR, press the Editing Button ⑫ on the NV-5130A to record the new material (B) on the NV-5130A tape.

11. To stop editing:

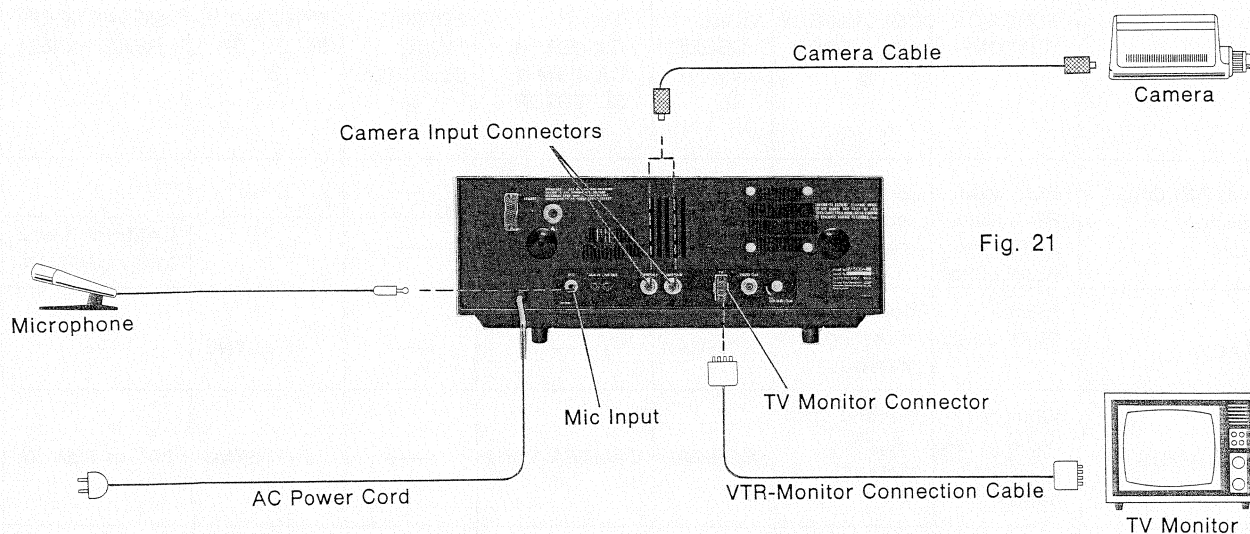
- (1) Press again the Editing Button ⑫. Editing will end and the image on the monitor changes to the normal playback.
- (2) Or press the Stop Button ㉑, and editing will end immediately.

(b) Insert editing

(Audio/Video, Video Only)

1. Set the Editing Mode Selector ⑭ to the "AUDIO/VIDEO INSERT" position when editing both the audio and video. Set it to the "VIDEO INSERT" position when editing the video only.
2. Follow instructions 2 through 10 of "Assemble editing."
3. When editing portions (A) and (B) in Fig. 18 reach their end, press again the Editing Button ⑫. Editing will end and the image on the TV monitor changes to the normal playback.
4. Do not press the Stop Button ㉑ or other buttons (ex. F.F., Rew) to stop editing, otherwise, the end of editing portion (B) will be disturbed and will not continue to (A) smoothly.

2. Editing from a camera



(a) Assemble editing

1. Set the Editing Mode Selector ⑭ to the "ASSY" position.
2. Set the TV/Camera-1/Camera-2 Selector ⑮ to the Camera-1 or Camera-2 whichever is used.
3. Playback the tape while watching the TV monitor. Stop the tape immediately when the editing portion (A) appears on the screen. (Refer to Fig. 17)
4. Press the Record Button ㉑, and adjust the audio and video recording level for optimum recording.
5. Confirm the beginning of editing portion (A) by the Tape Counter ⑨ or by watching the playback images.
6. Once editing portion (B) in Fig. 17 has been determined, rewind the tape for a few seconds, allowing a minimum of three feet from the beginning of the editing portion. This length will assure stabilization of the tape speed prior to the edit.
7. Playback the tape. At the moment when the image of the portion (A) from the camera appears on the preview TV monitor, press the Editing Button ⑫ to record it.
8. Use a microphone, if necessary, when the editing begins.
9. To stop editing:
 - (1) Press again the Editing Button ⑫. Editing will end and the image on the TV monitor changes to the normal playback.
 - (2) Or press the Stop Button ⑲ or other button (ex. F.F., Rew) to the "Stop" position, and editing will end immediately.

(b) Insert editing

(Audio/Video, Video only)

1. Set the Editing Mode Selector ⑭ to the "AUDIO/VIDEO INSERT" position when editing both the audio and video. Set it to the "VIDEO INSERT" position when editing the video only.
2. Follow instructions 2 through 8 of "Assemble editing."
3. When editing portions (A) and (B) in Fig. 18 reach their end, press again the Editing Button ⑫. Editing will end and the image on the TV monitor changes to the normal playback.
4. Do not press the Stop Button ⑲ or other buttons (ex. F.F., Rew) to stop editing, otherwise, the end of editing portion (B) will be disturbed and will not continue to (A) smoothly.

OPERATION GUIDE

PURPOSE	FUNCTION BUTTONS	COLOUR-B/W SELECTOR ②⑥	VIDEO DUBBING SWITCH ①⑤	TV/ CAMERA-1/ CAMERA-2 SELECTOR ②⑤	EDITING MODE SELECTOR ①④	SYNC MODE SELECTOR ②⑦	SIGNAL INPUT (REAR PANEL)
NORMAL RECORD (REC. button pressed)	Hold down REC. Button and press PLAY button	Depend upon recording material	NORMAL	TV	—	—	TV
				CAMERA-1 or 2	—	—	CAMERA-1 or 2 MIC or AUX IN
PLAYBACK	Press PLAY button	Depend upon recorded material	NORMAL	—	—	INT. SYNC	—
AUDIO DUBBING	While play- back, press AUDIO dub. button	Depend upon recorded material	NORMAL	CAMERA-1 or 2	—	INT. SYNC	MIC or AUX IN
ASSEMBLE EDITING Audio/Video	Press PLAY button, press EDIT button	Depend upon recording material	NORMAL	TV	ASSY	NORMAL	TV
				CAMERA-1 or 2	ASSY	NORMAL	CAMERA-1 or 2 MIC or AUX IN
INSERT EDITING Audio/Video	Press PLAY button, press EDIT button	Depend upon recording material	NORMAL	TV	INSERT A/V	NORMAL	TV
				CAMERA-1 or 2	INSERT A/V	NORMAL	CAMERA-1 or 2 MIC or AUX IN
INSERT EDITING Video Only	Press PLAY button, press EDIT button	Depend upon recording material	NORMAL	CAMERA-1 or 2	INSERT VIDEO only	NORMAL	CAMERA-1 or 2
VIDEO DUBBING	Press PLAY button	Depend upon playback material	DUB	—	—	INT. SYNC	—

NOTE:

Video Dubbing Switch ①⑤ is placed at "DUB" position so that the playback picture is fed into another VTR for fair dubbing.

Editing cautions:

- For ordinary editing, set the Sync Mode Selector ②⑦ to the "NORMAL" position. For detailed information, see page 11.
- Although it is possible to add a new B/W picture to an existing colour program (or the reverse; colour to existing black-and-white), it is not a suggested procedure for ordinary operation. If, for any reason, such editing is necessary, follow the hints below for best results.

1. When editing:

The Colour-B/W Selector ②⑥ must be set to the position corresponding to the source to be added before actually adding it.

2. During playback:

If the edited tape consisting of mixed colour and B/W portions is subsequently played back on this unit or any other unit which does not make automatic changeover between colour and B/W, the changeover must be made manually at the appropriate time.

3. The above information applies to both assemble editing and insert editing.

AUDIO DUBBING

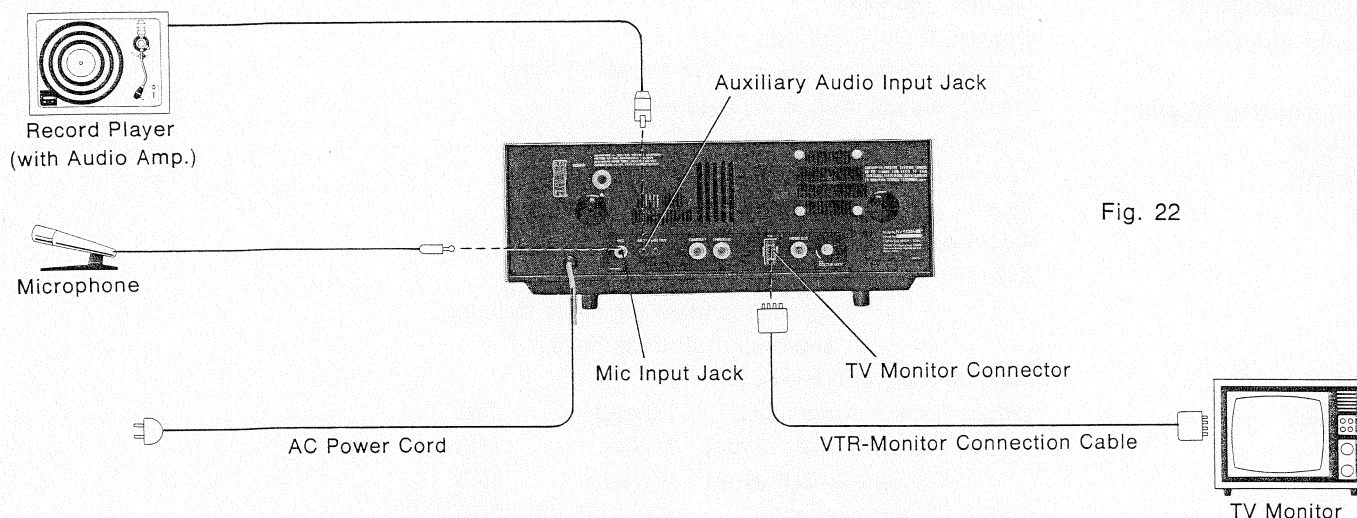


Fig. 22

Audio dubbing is to make an audio recording or a pre-recorded audio track of the tape.

1. Connect the audio recording sources as shown in Fig. 22.
2. Set the TV/Camera-1/Camera-2 Selector ②⑤ to the "CAMERA-1" or "CAMERA-2" position.
3. Set the Colour-B/W Selector ②⑥ to the position a corresponding to the program to be played back.
4. Insert a pre-recorded tape into the compartment. The tape will then start playing back.
5. Press the Stop Button ①⑨ after the cartridge is inserted.

6. Press the Record Button ②① and adjust the audio recording level with the Audio Recording Level Control ①⑩ and the Audio Recording Level meter ⑤. After set it press the Play Button ①⑧ again.
7. Press the Play Button ①⑧ and press the Audio Dubbing Button ②② at the same time at the desired point while monitoring playback images.
8. Press the Stop Button ①⑨ to stop the audio dubbing. The tape will stop moving at the same time.

HEAD CLEANING

HOW TO USE CLEANING TAPE (NV-P500)

(available as an optional)

1. Insert the cleaning tape into the Video Cartridge Compartment ②.
2. This tape will automatically rewind, stop and eject when cleaning is completed.
(Cleaning time: approx. 60 seconds)

CAUTIONS:

1. Prolonged usage will affect video head life.
2. Do not attempt to record or playback by using cleaning tape.

SPECIFICATIONS

Power Source:	AC 200V/220V/240V, 50Hz		
Power Consumption:	Approx. 120 watts		
Television System:	PAL/CCIR TV standard SECAM/CCIR TV standard (NV-5130A-EF only)		
Video Recording System:	2 rotary heads, frequency modulation		
Tape Speed:	163.22 mm/s		
Tape Width:	12.7 mm (1/2 inch)		
Heads:	Video:	2 rotary heads	
	Audio/control:	1 stationary head	
	Erase:	1 rotary head for video editing	
		1 stationary head for audio dubbing	
		1 stationary full track head	
Recording Time:	Max. 36 min. with NV-P530H		
Input Level:	Video: TV (8P connector)	1.0Vp-p	75Ω
	Camera-1 (UHF-type)	1.0Vp-p	75Ω
	Camera-2 (UHF-type)	1.0Vp-p	75Ω
	Audio: TV (8P connector)	min. -25 dB	220kΩ
	MIC	min. -72 dB	600Ω~20kΩ
	AUX IN	min. -25 dB	220kΩ
Output Level:	Video: TV (8P connector)	1.0Vp-p	75Ω
	Video out (UHF-type)	1.0Vp-p	75Ω
	Audio: TV (8P connector)	1.0Vrms	300Ω or less
	Line out	1.0Vrms	300Ω or less
Horizontal Resolution:	B/W:	More than 340 lines	
	Colour:	More than 260 lines	
Frequency Response:	Audio:	50~12,000 Hz ±3 dB	
Signal-to-Noise Ratio:	Video:	More than 46 dB (Rohde & Schwarz noise meter)	
	Audio:	More than 43 dB	
Operating Temperature:	+5°C~+40°C (41°F~104°F)		
Operating Humidity:	35%~80%		
Dimensions:	531mm(W)x415mm(D)x218mm(H)		
Weight:	Approx. 26 kg		
Standard Accessory:	VTR-monitor connection cable.....1		

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